REMARKS

Claims 1-23 were examined. Claims 1-3, 13, 19 and 23 were rejected. In response to the above-identified Office Action, Applicants amend the Specification and claims 1, 4, 10, 17, 22 and 23 to correct typographical and other minor errors, but do not cancel any claims or add any new claims. Reconsideration of the rejected claims in light of the aforementioned amendments and the following remarks is requested.

I. Claims Objections

The Examiner objected to claims 10 and 17 because they contained mathematical formulae with unbalanced parentheses. These errors have been corrected, and Applicants respectfully request that the Examiner withdraw the objections to the claims.

II. Overview of Argument

The Examiner rejected claims 1, 2, 13, 19 and 23 as anticipated by U.S. Patent No. 5,613,048 issued to Chen *et al.* ("*Chen*"), and rejected claim as unpatentable over the same reference. *Chen* provides a method useful in connection with the display of images on a monitor, and to which the term "morphing" can reasonably be applied, but apart from these similarities, there seems to be little in common between the reference and the current Application.

Chen describes a technique for generating interpolated views on a pixel-by-pixel basis. The technique is generally described at c. 4, ll. 4-16, and involves establishing a correspondence between pixels or points in pairs or sets of images, then creating intermediate images by shifting the corresponding points along the path joining the corresponding points between the images. The technique can be thought of as a "poor man's 3-D renderer," useful to produce pseudo-3-D-rendered images for camera positions between actually-rendered (or photographed) "key" frames.

In contrast, Applicants' invention provides a smooth transformation or "morph" between two or more geometric shapes so that, for example, a triangle can smoothly change into a square, or a circle can smoothly change into a five-pointed star.

Chen and embodiments of the current invention are different both in method and result, and Applicants believe that the currently-pending claims are clearly distinguishable from the teachings of *Chen*.

III. Claims Rejected Under 35 U.S.C. § 102(b)

The Examiner rejected claims 1, 2, 13, 19 and 23 under 35 U.S.C. § 102(b) as anticipated by *Chen* (*supra*).

Claim 1 recites a method for morphing geometric shapes comprising several steps, including extracting a direction map from each of the geometric shapes. *Chen*'s method operates on two or more two-dimensional images to be presented on a suitable display (*see* c. 3, ll. 35-40 and 60-64). It is clear that *Chen*'s images are rectangular arrays of pixels (*see* Fig. 3, Figs. 4A-4C and Figs. 5A-5C) generated by rendering or drawing selected views of a scene from different viewpoints (*see* c. 3, ll. 53-60), and not the claimed "geometric shapes."

Furthermore, even assuming (solely for the sake of argument) that either each pixel in an image or the whole rectangular image itself could be aligned with the claimed "geometric shape," *Chen* does not teach or suggest the claimed step of extracting a direction map *from each of the geometric shapes*. Instead, *Chen* teaches defining a set of points or line segments within *a pair or set* of images. Even if the set of points or line segments was taken to be the claimed direction map, it is not extracted from *each* of the geometric shapes. Instead, the set of points or line segments connects *two* (or more) images. In other words, while the claimed direction map is associated with only one geometric shape, *Chen*'s alleged direction map is associated with *two or more* of his alleged geometric shapes.

For at least these reasons, Applicants respectfully submit that *Chen* fails to teach or suggest every element of claim 1, and ask the Examiner to withdraw the rejection of that claim.

As to claims 2, 13 and 19, those claims depend upon claim 1, and are patentable for at least the reasons discussed with respect to that base claim. Applicants respectfully request that the Examiner withdraw these rejections also.

Claim 23 recites a computer readable recording medium for storing a program that implements a geometric shape morphing method similar to the method of claim 1, and including the same limitation as discussed above, "extracting a direction map from each of the geometric shapes." As previously discussed, *Chen* does not teach or suggest at least geometric shapes and extracting a direction map from each geometric shape.

Therefore, Applicants submit that *Chen* fails to anticipate claim 23, and request that the rejection thereof be withdrawn.

IV. Claims Rejected Under 35 U.S.C. § 103(a)

The Examiner rejected claim 3 under 35 U.S.C. § 103(a) as obvious in view of *Chen* (*supra*). However, claim 3 depends upon claim 1, which was shown to be patentable over the references of record in the preceding discussion. For at least the reasons explained there, Applicants submit that claim 3 is also patentable over the references of record, and ask that the Examiner withdraw this rejection.

V. Allowable Material

Applicants note with appreciation that the Examiner has determined claims 4-12, 14-18 and 20-22 to contain allowable material.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely claims 1-23, patentably define the subject invention over the prior art of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (310) 207-3800.

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Respectfully submitted,
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Marilyn Bass — 09-21-05
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